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Fig. 5A

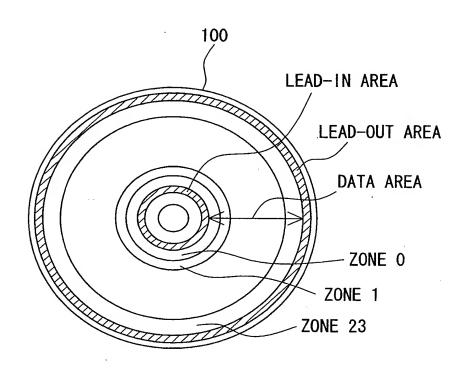
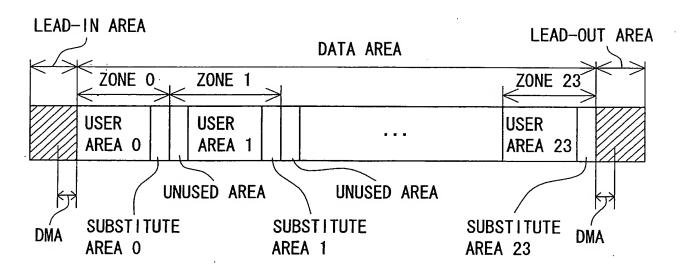
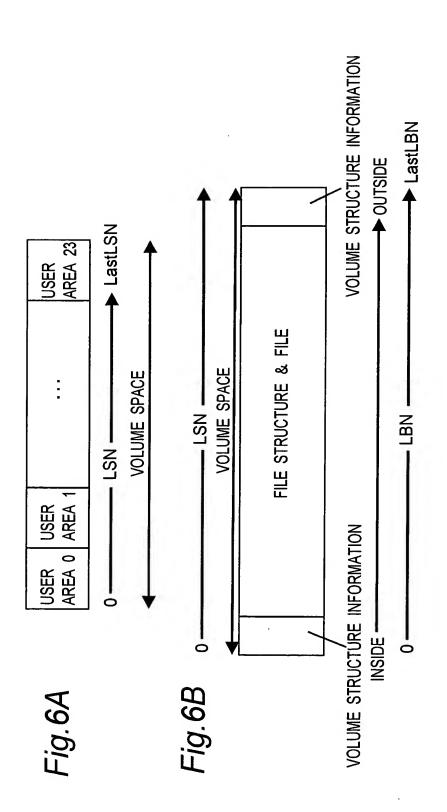
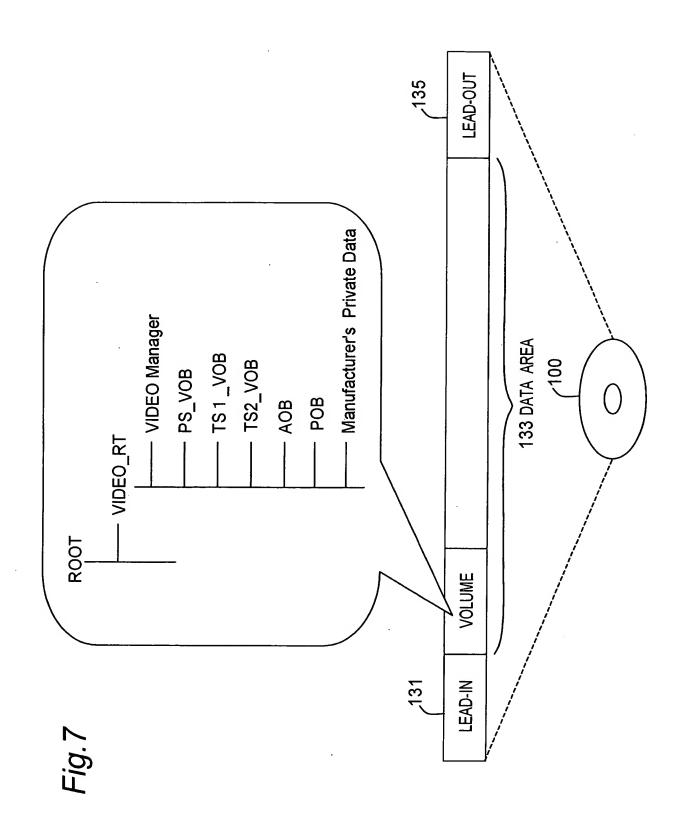


Fig. 5B







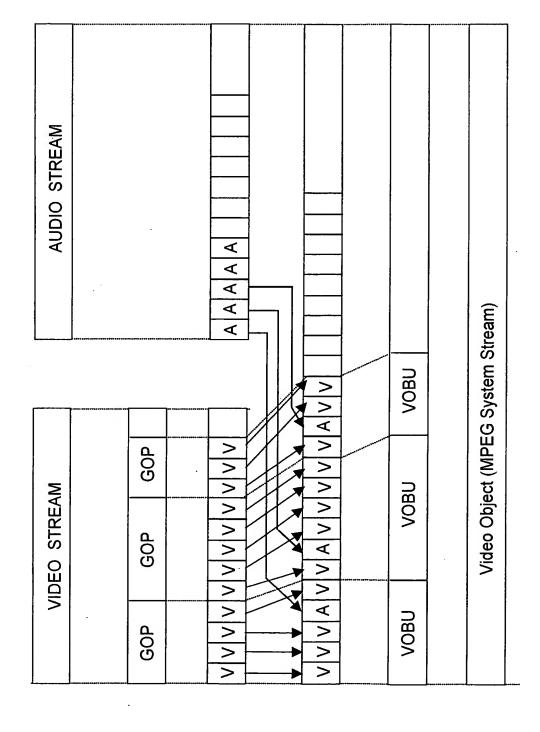
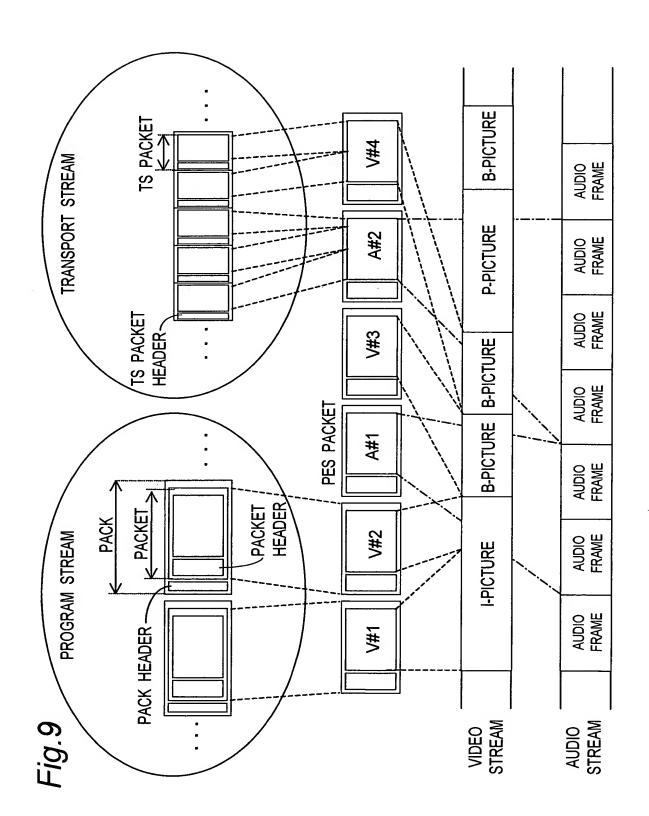
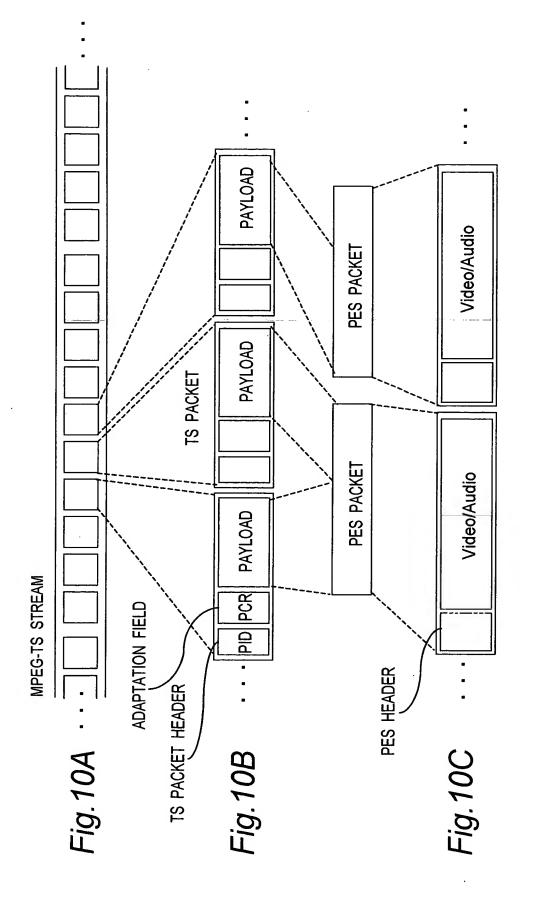
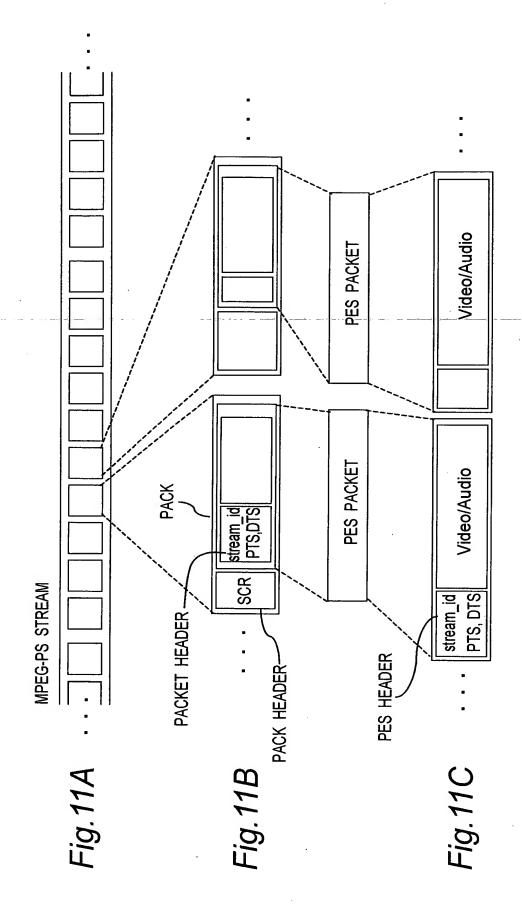


Fig.8







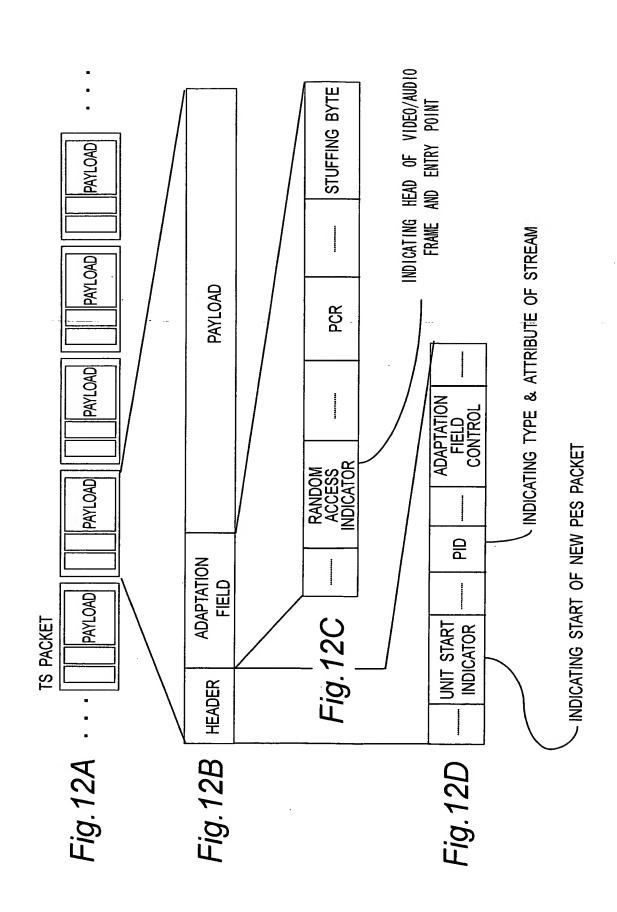


Fig. 13A

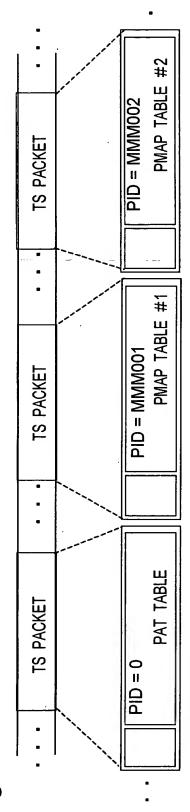


Fig. 13B

Fig. 13C1
PMAP TABLE #1

Video	PID=vv001
Audio	PID=aa002

PMAP TABLE #2

PROGRAM 2

PMAP TABLE #1

PROGRAM 1

PAT TABLE

Fig. 13C2
PMAP TABLE #2

PMAP TABLE #n

PROGRAM n

PID=vv002	PID=aa001
Video	Audio

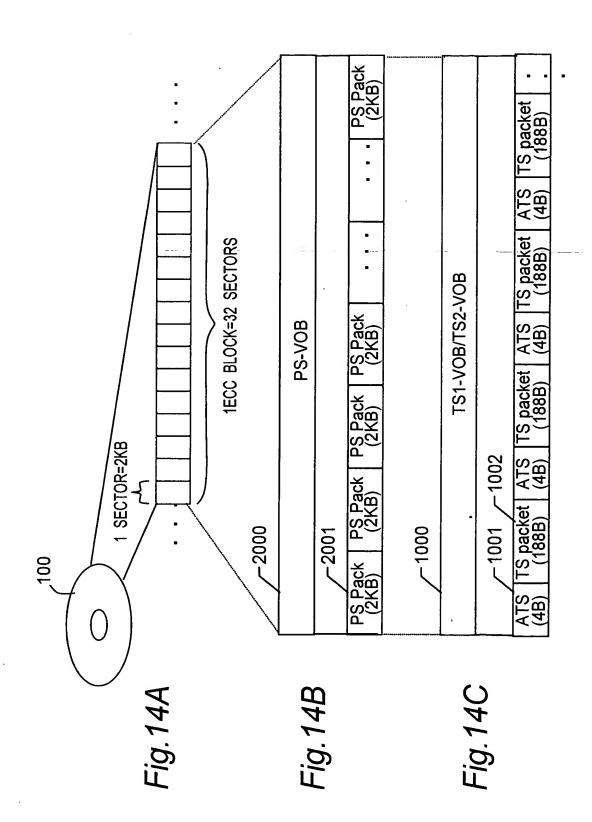
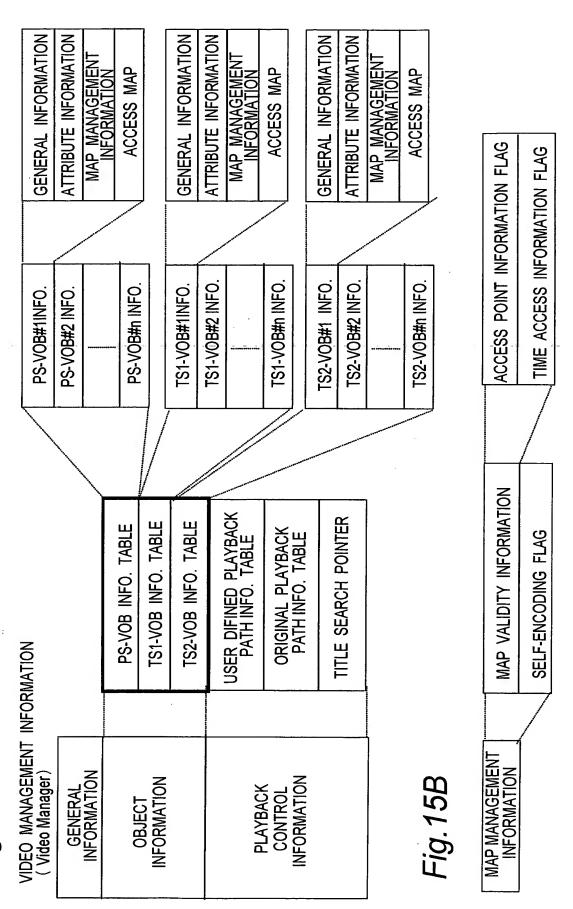
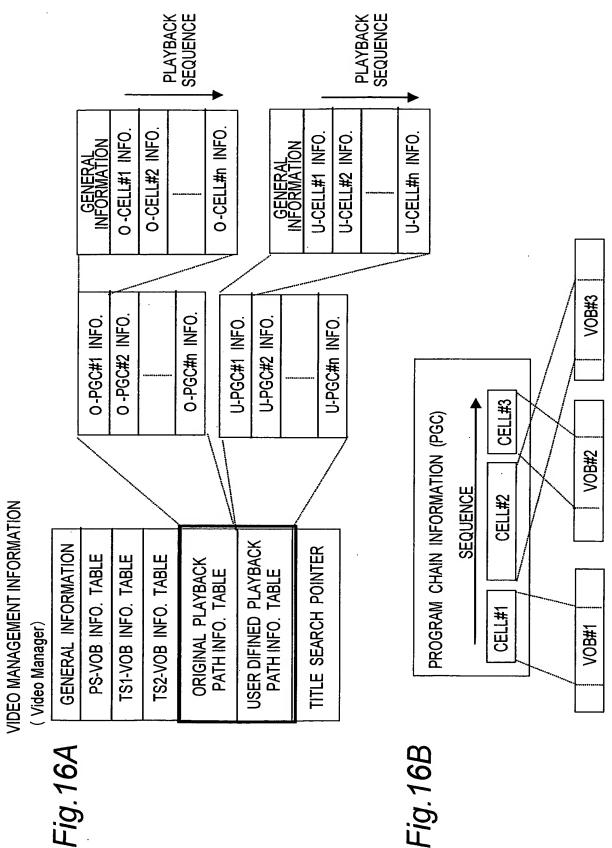
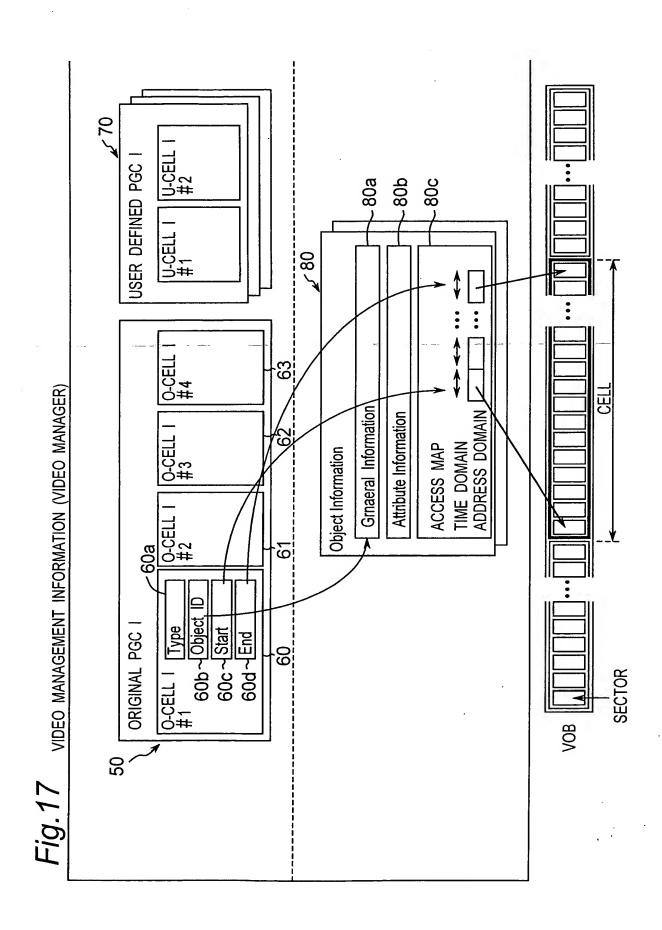


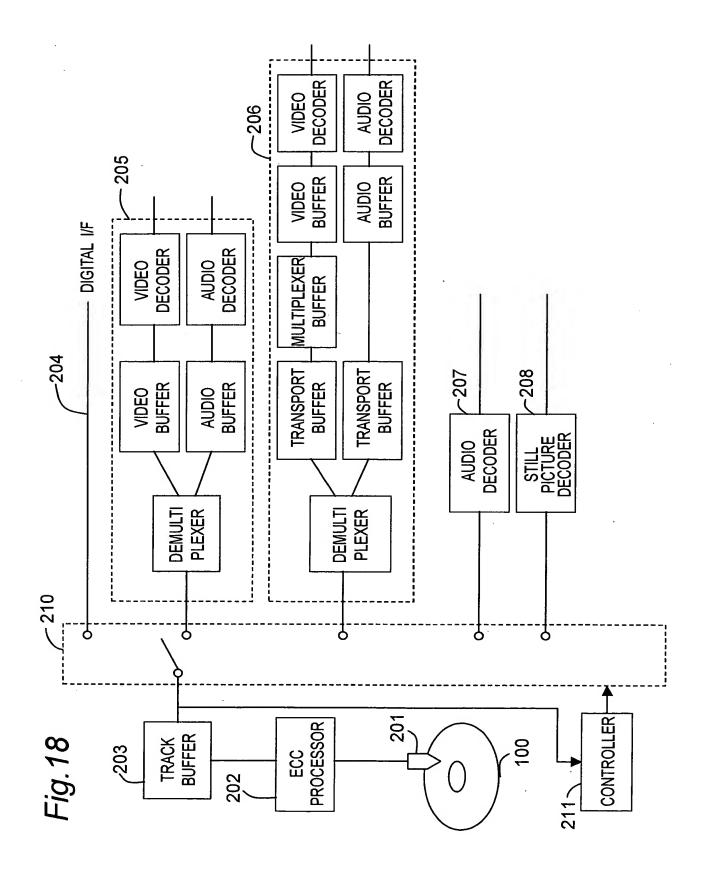
Fig. 15A

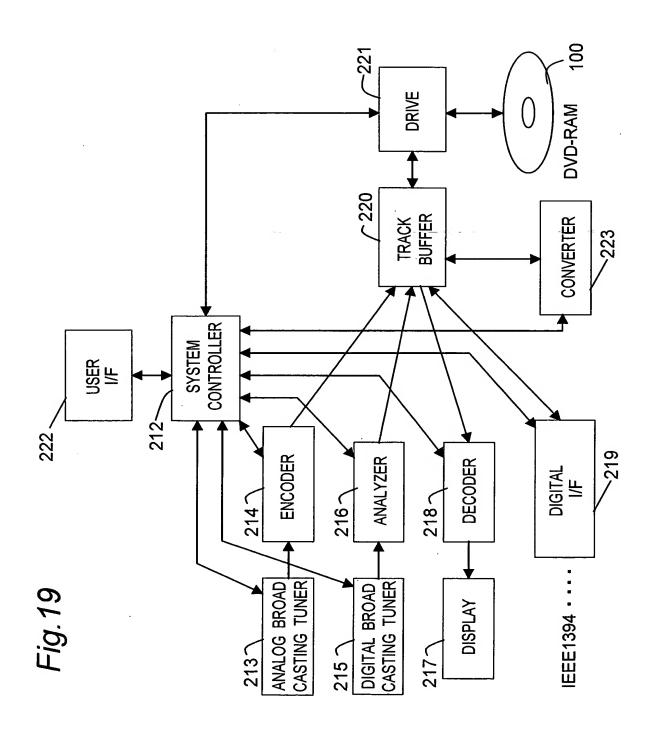
, i. .

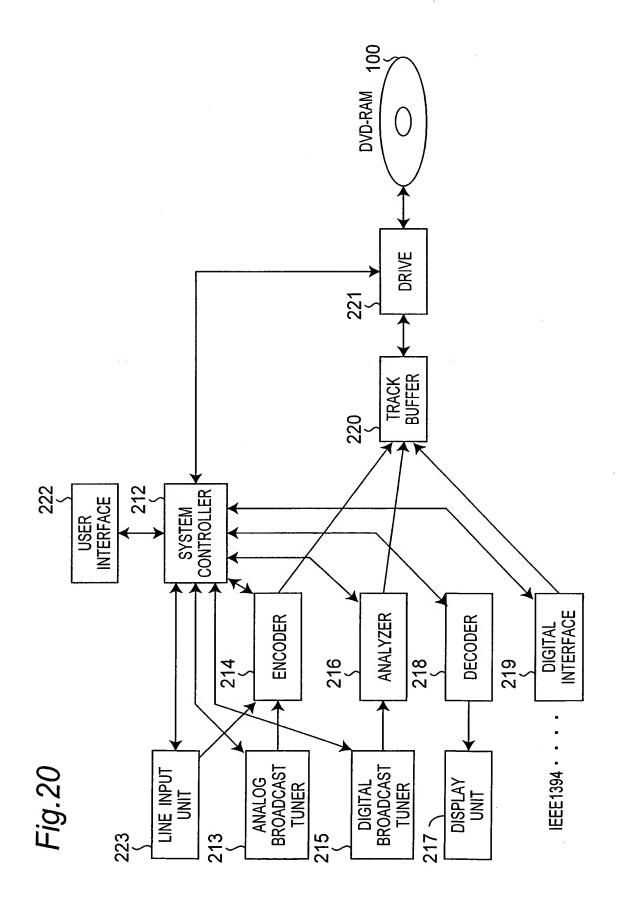




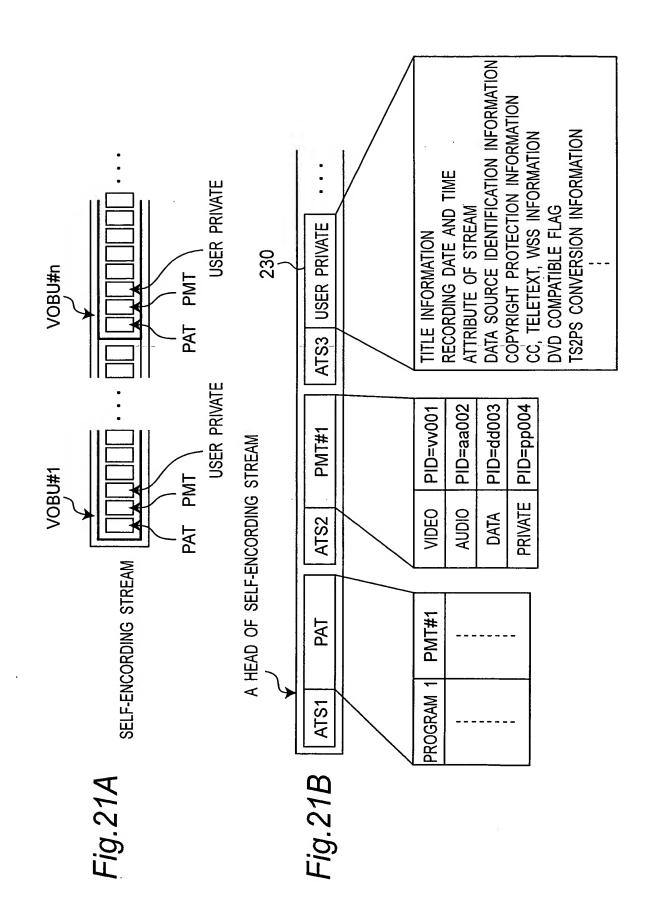


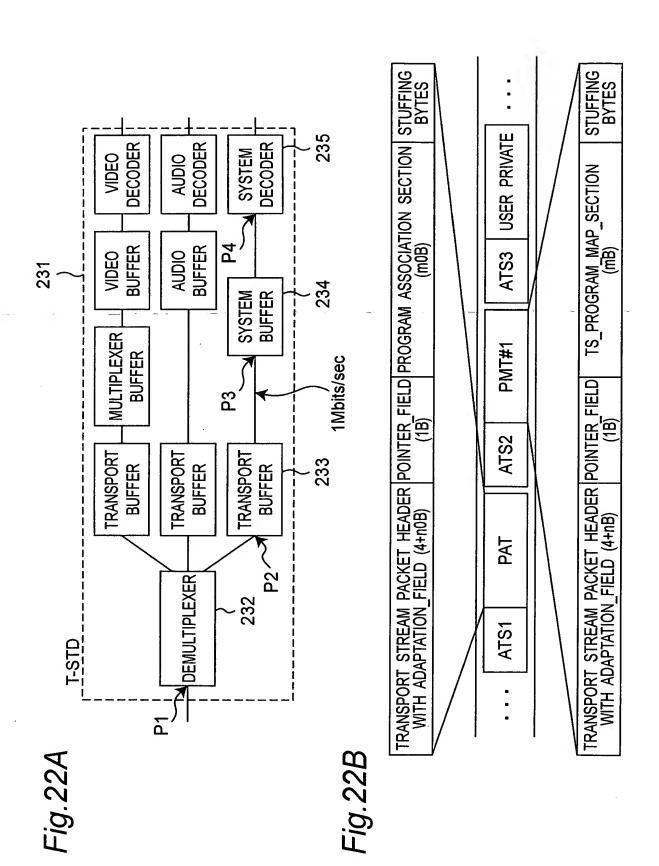


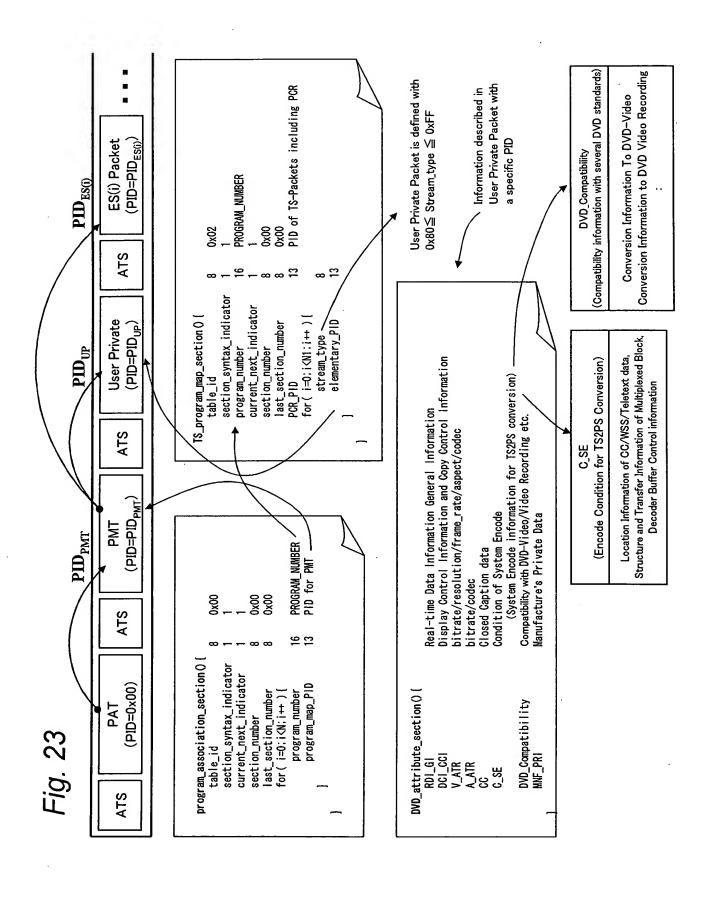




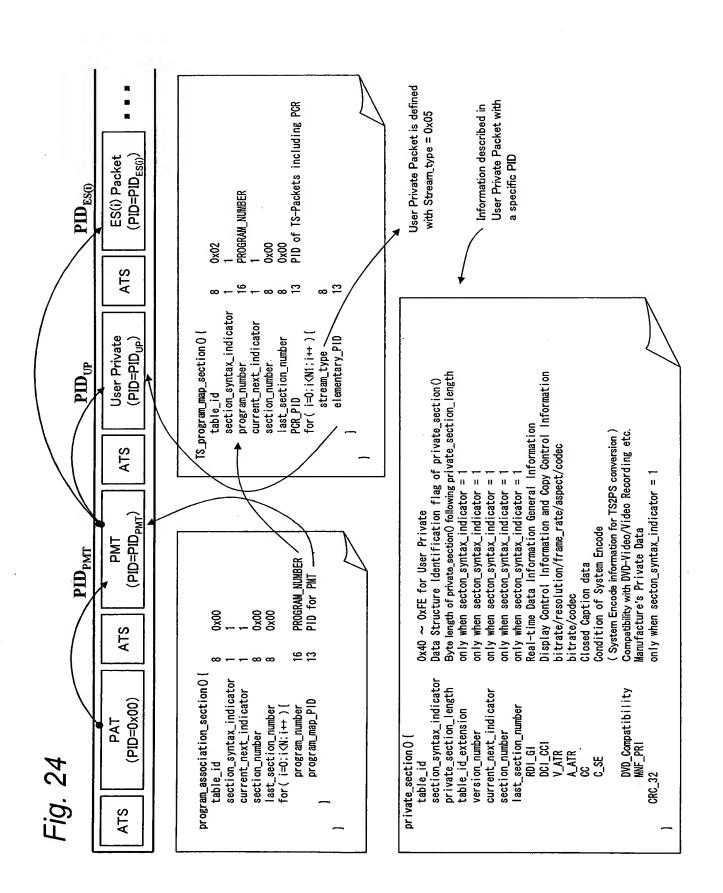
.



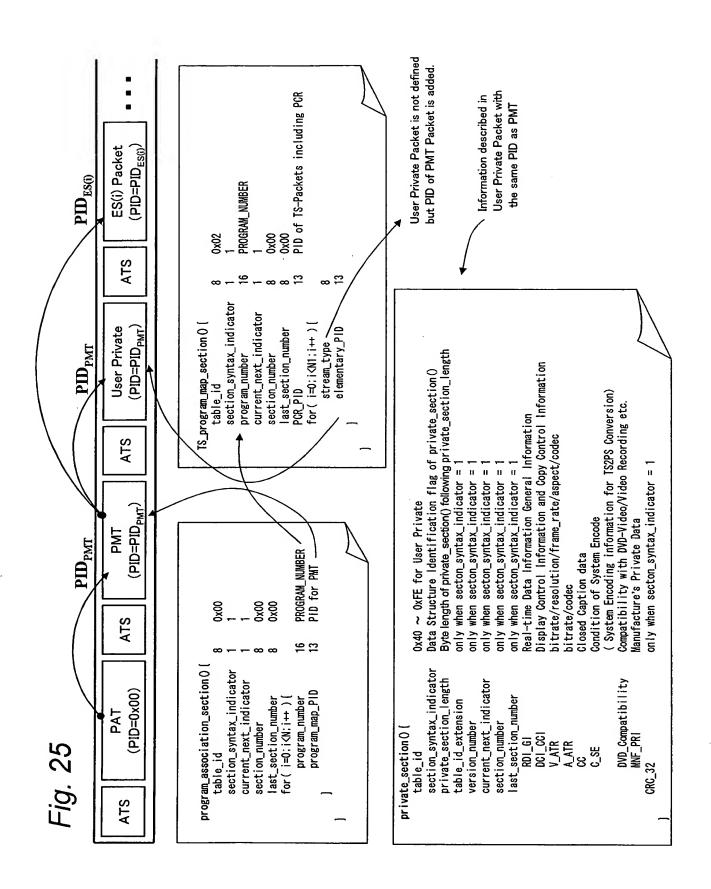




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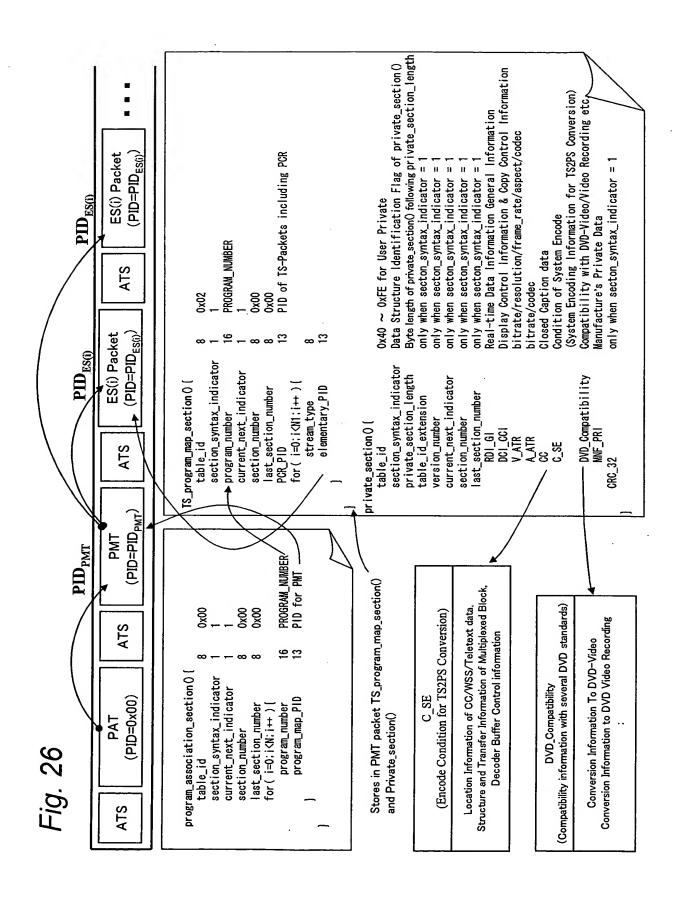
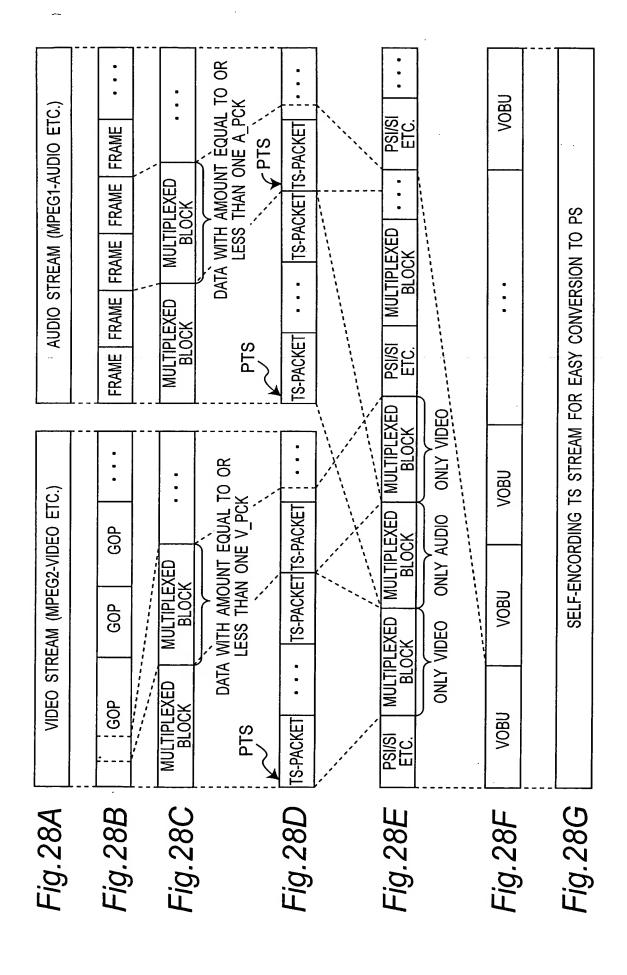
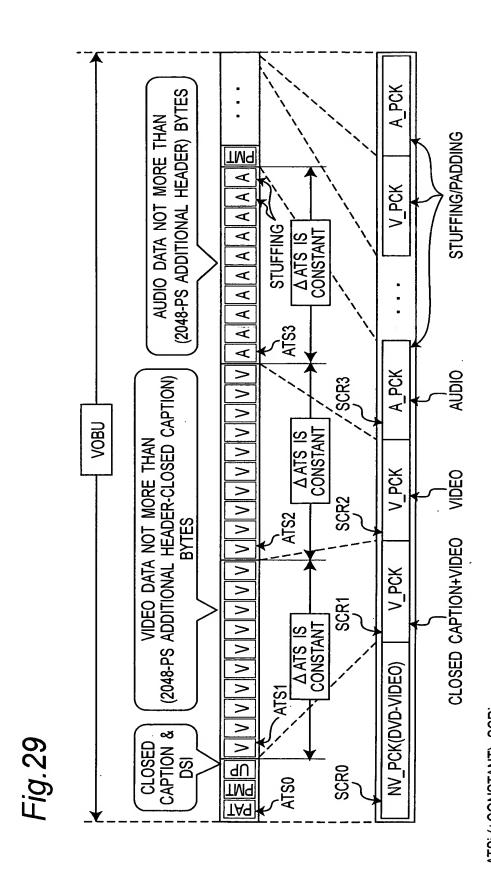


Fig.27A	SELF-ENCO	ORDING TS STREAM FOR EASY CONVERSION TO PS	AM FOR EASY (CONVERSION	TO PS		
Fig.27B	VOBU#1 VOBU#2	VOBU#3	VOBU#4		•		VOBU#end
Fig.27C	MULTIPLEXED BLOCK #1	MULTIPLEXED BLOCK #2	MULTIPLEXED BLOCK #3	XED #3	MULTIPLEXED BLOCK #4		
Fig.27D	本語 シックマック			\ \ \ \ \	AAAAAA	A A A P	
. — <u>-</u>	FIXED LENGTH	I BLOCK					
Fig.27E		$\sqrt{ V V V V}$			AAAAAAA		VVV
	VARIABLE LENGTH BLOCK	GTH BLOCK					
Fig.27F		V V V V V		VVVA	AAAAA	IWd	VVVA
- 	BLOCK INCLUDING PSI/SI/U	USER PRIVATE	\				
Fig.27G	NV_PCK(DVD-VIDEO)	V_PCK	V_PCK	A_PCK	•	V_PCK	A_PCK
Fig.27H	RDI_PCK(DVD VR)	V_PCK	V_PCK	A_PCK	<u></u> :	V_PCK	A_PCK

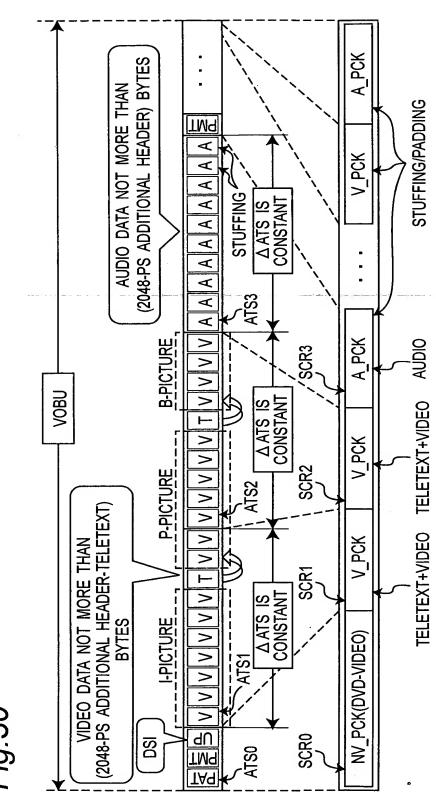
^(*) CAPSULE HEADER AND ATS ARE OMITTED.(*) EACH PACK IN FIGS. 27G AND 27H ARE STUFFED/PADDED ACCORDING TO BYTE LENGTH OF ELEMENTARY OR VOBU ALIGNMENT.





ATSI (+NUMBER ÓF PACKETS IN THE MULTIPLEXED BLOCK)* ∆ ATS≦ATSi+1 ATSI (+NUMBER OF PACKETS IN THE MULTIPLEXED BLOCK)* ∆ ATS<ATSi+1 SCRi+1-SCRi≥8*2048*27*/10.08 ATSi (+CONSTANT)=SCRi

FOR ALL i FOR FIXED LENGTH MULTIPLEXED BLOCK FOR VARIABLE LENGTH MULTIPLEXED BLOCK MPEG-PS MUX_RATE=10.08 Mbps

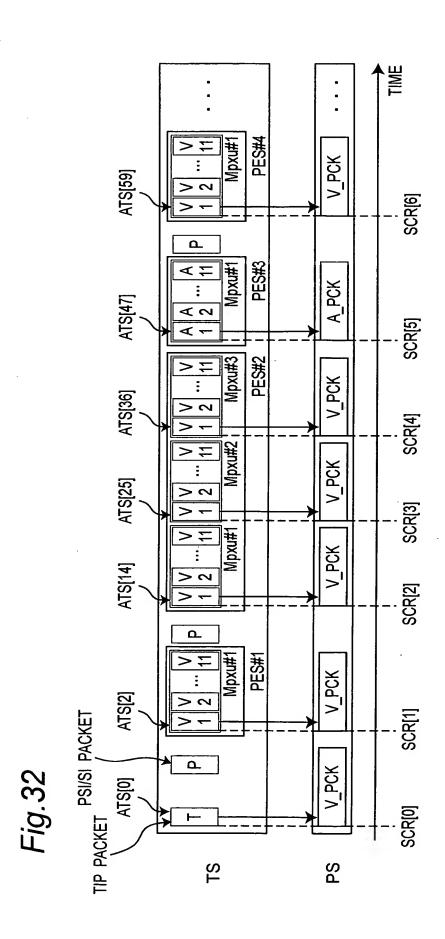


= 100

Fig. 3(

Fig. 31

```
// same as DVD-Video/VR spec.
// same as DVD-Video/VR spec.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           // same as DVD VR spec.
// max.120 = 60fields * 2B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          // same as DVD VR spec.
// same as DVD VR spec.
// same as DVD VR spec.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \label{eq:codec} $$ video\_format(3b)/codec(3b)/resolution(3b)/bitrate(3b)/reserved(4b) $$ codec(3b)/bitrate(5b)/channel(4b)/quantization(2b)// max. 2 audio stream $$$ codec(3b)/bitrate(5b)/channel(4b)/quantization(2b)// max. 2 audio stream $$$$ codec(3b)/bitrate(5b)/channel(4b)/quantization(2b)// max. 2 audio stream $$$$$ codec(3b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channel(4b)/channe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         // no stuffing before private_section()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (*) Ceil() means round-up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               // following private_data_byte length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             // short version of private_section()
                                                                                                                                                                                                                                                                                                                                                                                  // no adaptation_field, payload only
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    148 - ceil(Line21_data_length/8) - Line21_data_length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                // 0x40-0xFE for User private
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           // reserved for future use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            valid/invalid flags of each Line21_data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           presentation starting time of this VOBU
length of the Line21 data for this VOBU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Display Control Inforamtion
Copy Control Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RDI_G1 (Real-time Data Information General Information)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ES_ATRI (Elementary Stream Attribute Information)
                                                             8655563348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8 4 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Line21_switch ceil(Line21_data_length/8)B
Line21_data (Line21_data_length)B
MNF_ID 13-145B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      if (Line21_data_length i=0)(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      section_syntax_indicator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Line21_data_length
                                                                                                                                                                                                                                                                                                                             transport_scrambling_control
                                                                                                                                                                payload_unit_start_indicator
User_Private_transport_packet() {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               private_section_length
                                                                                                          transport_error_indicator
                                                                                                                                                                                                                                                                                                                                                                              adaptation_field_control
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       private_indicator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           private_section() (
                                                                                                                                                                                                                     transport_priority
                                                                                                                                                                                                                                                                                                                                                                                                                                    continuity_counter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pointer_field
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 reserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   else (
```



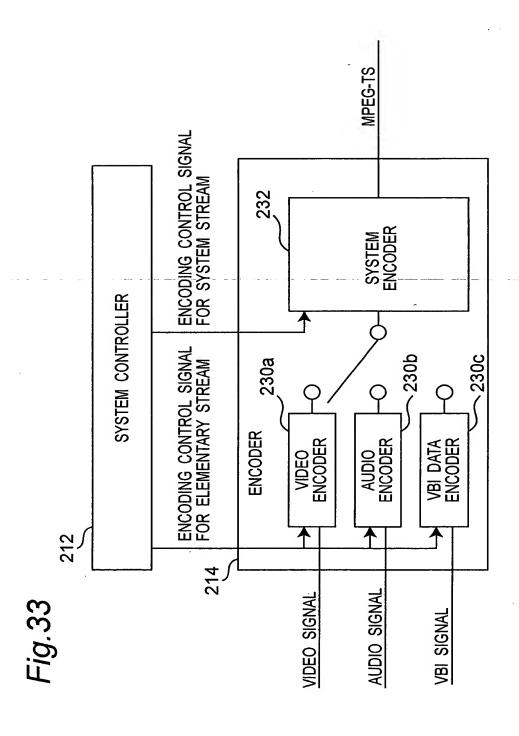


Fig.3

DVD-Video / DVD VR FORMAT	MPEG-TS ENCODED WITH SYSTEM ENCODE CAPABLE OF EASY CONVERSION TO MPEG-TS (CONSTRAINED SESF)	(CONVERSION TO DVD-Video) ELEMENTARY CAN BE USED AS IT IS. IN RE-ENCODING TO MPEG-PS, ELEMENTARY STREAM DO NOT HAVE TO BE ANALYZED, AND BUFFER MANAGEMENT IS ALSO NOT NEEDED.	(CONVERSION TO DVD VR) ELEMENTARY CAN BE USED AS IT IS. IN RE-ENCODING TO MPEG-PS, ELEMENTARY STREAM DO NOT HAVE TO BE ANALYZED, AND BUFFER MANAGEMENT IS ALSO NOT NEEDED.
CONVERSION FROM SELF-ENCODING MPEG-TS TO DVD-Video / DVD VR FORMAT	MPEG-TS ENCODED WITH NORMAL SYSTEM ENCODE (SESF)	(CONVERSION TO DVD-Video) ELEMENTARY CAN BE USED AS IT IS. IN RE-ENCODING TO MPEG-PS, ELEMENTARY STREAM HAS TO BE ANALYZED. THE PROCESS IS COMPLICATED.	(CONVERSION TO DVD VR) ELEMENTARY CAN BE USED AS IT IS. IN RE-ENCODING TO MPEG-PS, ELEMENTARY STREAM HAS TO BE ANALYZED. THE PROCESS IS COMPLICATED.
CONV		WHEN ENCODED TO ELEMENTARY STREAM COMPATIBLE WITH DVD-Video	WHEN ENCODED TO ELEMENTARY STREAM COMPATIBLE WITH DVD VR

Fig.35

Tip PACKET		
Syntax	No. of bits	Mnemonic
transport_packet(){		
sync_byte	8	bsibf
transport_error_indicator	_	bslbf
payload_unit_start_indicator	-	bslbf
transport_priority	-	bslbf
DID	13	uimsbf
transport_scrambling_control	2	bslbf
adaptation_filed_control	2	pslbf
continuity_counter	4	uimsbf
adaptation_field()		
Tip_Data(){		
Data_ID()	4 * 8	
display_and_copy_info()	8 * 8	
encode_info()	141 * 8	
MakersPrivateData()	41 * 8	
}		

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Syntax No. of bits Mnemon adaptation_field(){ adaptation_field_length 8 uimsbf adaptation_field_length 1 bslbf random_access_indicator 1 bslbf random_access_indicator 1 bslbf PCR_flag 1 bslbf PCR_flag 1 bslbf splicing_point_flag 1 bslbf transport_private_data_flag 1 bslbf adaptation_field_extension_flag 1 bslbf program_clock_reference_base 3 uimsbf reserved 6 bslbf program_clock_reference_extension 9 uimsbf	adaptation_field()		
access_indicator 1 _access_indicator 1 _access_indicator 1 _access_indicator 1 _ag 1 _point_flag 1 <t< th=""><th>Syntax</th><th>No. of bits</th><th>Mnemonic</th></t<>	Syntax	No. of bits	Mnemonic
sator 1 ndicator 1 n_priority_indicator 1 sxtension_flag 1 lock_reference_base 33 lock_reference_extension 6	adaptation_field(){		
indicator 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	adaptation_field_length	8	uimsbf
indicator 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	discontinuity_indicator	_	pslbf
indicator 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	random_access_indicator	_	bslbf
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	elementary_stream_priority_indicator	_	bslbf
1 1 flag 1 ence_base 33 ence_extension 9	PCR_flag	~	bslbf
1 1 flag 1 ence_base 33 ence_extension 9	OPCR_flag	-	bslbf
flag 1 ence_base 33 ence_extension 9	splicing_point_flag	1	pslbf
ield_extension_flag1am_clock_reference_base33ved6am_clock_reference_extension9	transport_private_data_flag	1	bslbf
clock_reference_base3366clock_reference_extension9	adaptation_field_extension_flag	_	bslbf
clock_reference_extension 9	program_clock_reference_base	33	uimsbf
o o	reserved	9	bslbf
	program_clock_reference_extension	6	uimsbf
	}		

Data_ID()		
Syntax	No. of bits	Mnemonic
Data_ID (){		
Data_Identifier	24	uimsbf
reserved	8	bslbf
{		

display_and_copy_info()		
Syntax	No. of bits	Value
display_and_copy_info(){		
reserved	40	bslbf
display_control_info_status	2	bslbf
reserved	2	bslbf
copy_control_info_status	က	bslbf
reserved	1	bslbf
Aspect ratio	4	bslbf
Subtitling mode	2	bslbf
reserved	_	bslbf
Film camera mode	1	bslbf
CGMS	2	bslbf
APSTB	2	bslbf
Source	1	bslbf
reserved	3	bslbf
}		

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C)
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encode_info()		
Syntax	No. of bits	Value
encode_info(){		
video_resolution	4	bslbf
reserved	2	bslbf
encode_condition	2	bslbf
reserved	80	pslbf
FVFPST	48	bslbf
reserved	8	pslbf
PES-info()	976(=8 * 122)	
}		

PES_INFO(
SYNTA	NO. OF BITS	VALU
PES_info(){		
for(j=0;j<136;j++){		
PES_existence_flag	_	bslbf
PES_payload_identifier		bslbf
If(PES_payload_identifier==0b){		
picture_coding_type	2	pslbf
If(PES_payload_identifier==1b){		
stream_identifier		pslbf
sync_presentation_flag	1	bslbf
while(!bytealigned)		
zero_bit	_	pslbf

MakersPrivateData()	-	
Syntax	No. of bits	Value
MakersPrivateData(){		
maker_ID	16	uimsbf
maker_private_data	312(=39 * 8)	bslbf
		200000

Fig. 42A

PID assignments	
PID value	meaning
0x1031	The PID of the transport packets which carry the Tip data stream

		m
ments	Description	Tip data stream
stream_type assignments	stream_type value	0xC3

Fig.42B

PES PACKET HEADER OF PES PACKET IN CONSTRAINED SESF	KET IN CONSTRAINED SESF
fields	Permitted value in Constrained SESF
PES_packet_length	CONFOM TO ISO/IEC13818-1
PES_priority	90
data_alignment_indicator	90
copyright	qo
PTS_DTS_flags	00b,10b or 11b
ESCR_flag	qo
ES_rate_flag	q0
DSM_trick_mode_flag	qo
additional_copy_info_flag	qo
PES_CRC_flag	qo
PES_extension_flag	Reter to Fig.31
PES_header_data_length	Reter to Fig.31
PES_private_data_flag	0b, if exists
pack_header_field_flag	0b, if exists
program_packet_sequence_counter_flag	0b, if exists
P-STD_buffer_flag	0b, if exists
PES_extension_flag_2	0b, if exists
stuffing_byte	STUFFED FULLY WITH '0xFF'

		.			1	
	=11b	BYTE LENGTH OF stuffing_byte	c	>		4
ength	encode_condition=11b	BYTE LENGTH OF VALUE OF PES_extension_flag BYTE LENGTH OF stuffing_byte AND PES_header_data_length stuffing_byte	PES_extension_flag=0b	PES_header_data_length=VPD	PES_extension_flag=0b	PES_header_data_length=VPD+4
header_data_le	q	BYTE LENGTH OF stuffing_byte	2	0	9	4
CONSTRAINT FOR PES_extension_flag AND PES_header_data_length	encode_condition=01b	STORED MVLTIPLEXED VALUE OF PES_extension_flag DATA POSITION AND PES_header_data_length	PES_extension_flag=1b PES_header_data_length=VPD+3	PES_extension_flag=0b PES_header_data_length=VPD	PES_extension_flag=1b PES_header_data_length=VPD+7	PES_extension_flag=0b PES_header_data_length=VPD+4
RAINT FOR	PES packet	MVLTIPLEXED POSITION	FIRST MPEG2- FOLLOWING Video,	OTHERS	FIRST FOLLOWING TIP PACKET	OTHERS
CONST	PES	STORED DATA	MPEG2- Video,	MPEG1- Audio	AC-3	andio

VPD= (WHEN PTS_DTS_flags=01b) 10, (WHEN PTS_DTS_flags=11b)

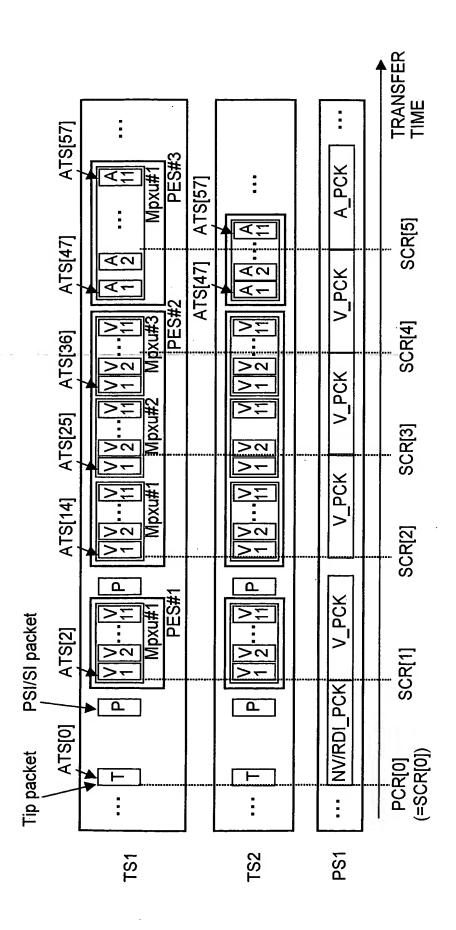
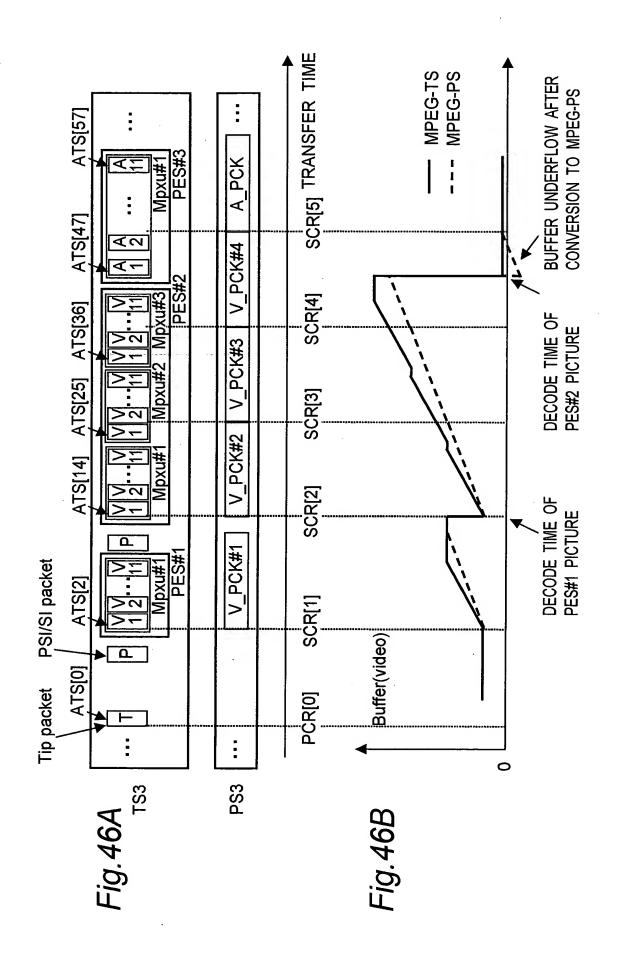
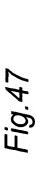
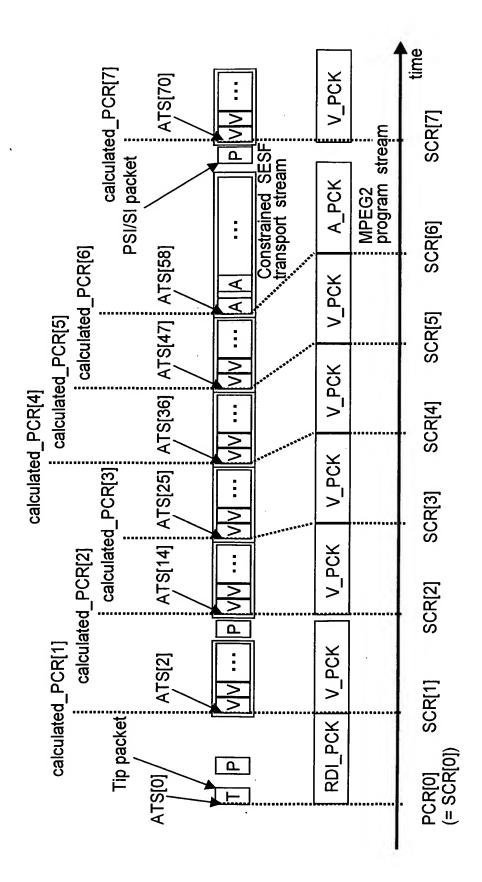


Fig. 45







	ATTRIBUTE	ATTRIBUTE OF ELEMENTARY STREAM FOR encode_condition=01b	encode_condition=01b
		NTSC	PAL
	Source picture resolution	720x480,704x480,	720x576,704x576, 544x576,480x576
		352x480,352x240 (*Note2)	352x576,352x288 (*Note2)
	Aspect ratio	Display aspect ratio	Display aspect ratio (*Note2) of 4:3 or 16:9
	Bit rate	sdqW8.6	9.8Mbps (MAXIMUM)
	GOP length	36 or less display fields	30 or less display fields
7.7	Sequence_end_code	at least 90 display fields for sequence_end_code (*Note3)	at least 75 display fields for sequence_end_code (*Note3)
OBBI	Closed Captioning data	GOP layer user_data (same format as DVD VR) Picture layer (same format as ATSC)	N/A
	Teletext	N/A	Teletext transport packet (same format as DVB)
	WSS	(Tip transport packet)	Tip transport packet Picture layer user_data (SESF original format)
	Quantization		16bits
	Sampling frequency	7	48KHz
Audio	Bit rate	64-384Kbps for MPEG-1 Aud	64-384Kbps for MPEG-1 Audio, 64-448Kbps for AC-3 (*Note1)
	Number of audio channels	1-2ch and dual mo	1-2ch and dual mono for MPEG-1 Audio, 1-5.1ch and dual mono for AC-3 (*Note4)

			V_PCK	DS1 (1017B)	
	VOB	VOBU		SUB_ STREAM_ID (1	
		018	A_PCK	PACKÉT HEADER (6B)	. fat
0:				PCI (979B)	8
STREAM STRUCTURE OF DVD-VIDEO	-		-	T SUB_ R STREAM_ID (2048B
URE OF			V_PCK	PACKET HEADER (6B)	
STRUCT	VOB	VOBU		SYSTEM HEADER (24B)	
STREAM			NV_PCK	PACK HEADER (14B)	

FIE. 51

PCI OF NV_PCK		
SYNTAX	NO. OF BITS	MNEMONIC
PCI () {		
() I9 ⁻ I04	480 (=8*60)	
NSML_AGLI ()	288 (=8*36)	
HLI ()	5552 (=8*694)	
RECI ()	1512 (=8*189)	
	Tanan manana	

ļ	27
	ρġ
	1

PCI_GI OF NV_PCK		
SYNTAX	NO. OF BITS	MNEMONIC
PCI_GI () {		
NV_PCK_LBN	32	uimsbf
VOBU_CAT	16	bslbf
reserved	16	bslbf
V0BU_U0P_CTL	32	bslbf
VOBU_S_PTM	32	uimsbf
VOBU_E_PTM	32	uimsbf
VOBU_SE_E_PTM	32	uimsbf
C_ELTM	32	bslbf
reserved	256	bslbf
{	-	

Fig. 53

DSI OF NV_PCK		
SYNTAX	NO. OF BITS	MNEMONIC
) () ISO		
() ISI_6I ()	256 (=8*32)	
SML_PBI ()	1184 (=8*148)	
SML_AGLI()	432 (=8*54)	
VOBU_SRI ()	1344 (=8*168)	
SYNCI ()	1152 (=8*144)	
reserved	3768 (=8*471)	bslbf
{		

Fig. 54

DSI_GI OF NV_PCK		
SYNTAX	NO. OF BITS	MNEMONIC
DSI_GI() {		
NV_PCK_SCR	32	uimsbf
NV_PCK_LBN	32	uimsbf
V0BU_EA	32	uimsbf
VOBU_1STREF_EA	32	uimsbf
VOBU_ZNDREF_EA	32	uimsbf
VOBU_3RDREF_EA	32	uimsbf
VOBU_VOB_I DN	16	uimsbf
reserved	8	bslbf
VOBU_C_IDN	8	uimsbf
C_ELTM	32	bslbf

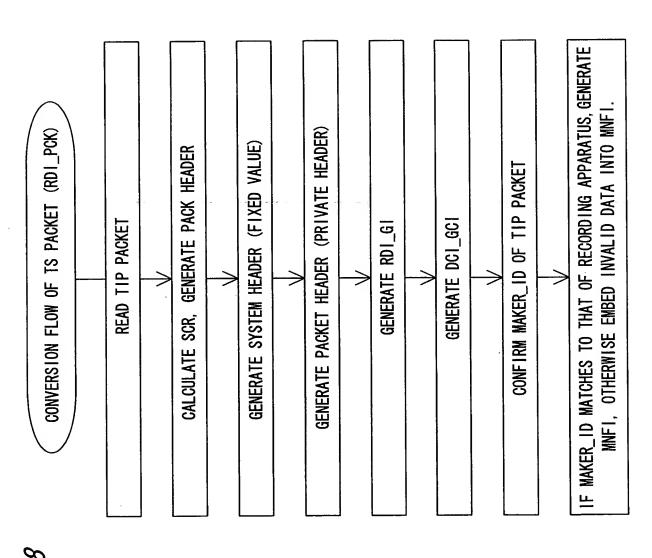
FIR. 55

SML_PBI OF NV_PCK		
SYNTAX	NO. OF BITS	MNEMONIC
PML_PBI() {		
VOBU_SML_CAT	16	bslbf
ILVU_EA	32	uimsbf
NXT_ILVU_SA	32	uimsbf
NXT_ILVU_SZ	16	uimsbf
VOB_V_S_PTM	32	uimsbf
VOB_V_E_PTM	32	uimsbf
VOB_A_STP_PTM	512 (=8*64)	bsibf
VOB_A_GAP_LEN	512 (=8*64)	bslbf
1		

SYNCI OF NV_PCK		
SYNTAX	NO. OF BITS	MNEMONIC
A_SYNCAO	16	bslbf
••		
A_SYNCA7	16	bslbf
SP_SYNCA0	32	bsibf
••		
SP_SYNCA31	32	bslbf
	*	

Fig. 57

RECORDING	V0B	VOBU	A_PCK V_PCK		KUI	(Z003B)				MNF1 (1979B)
STREAM STRUCTURE OF DVD VIDEO RECORDING			• •	SUB_	STREAM_ID	(1B)	2048R			
URE OF			V_PCK	PACKET	HEADER	(eB)				
STRUCT	VOB	VOBU		SYSTEM	HEADER	(24B)				DCI_CCI (8B)
STREAM			RD1_PCK	PACK	HEADER	(14B)		\ /	$\left \left \right \right $	RD1_G1 (16B)



. 4.1.

Fig. 58

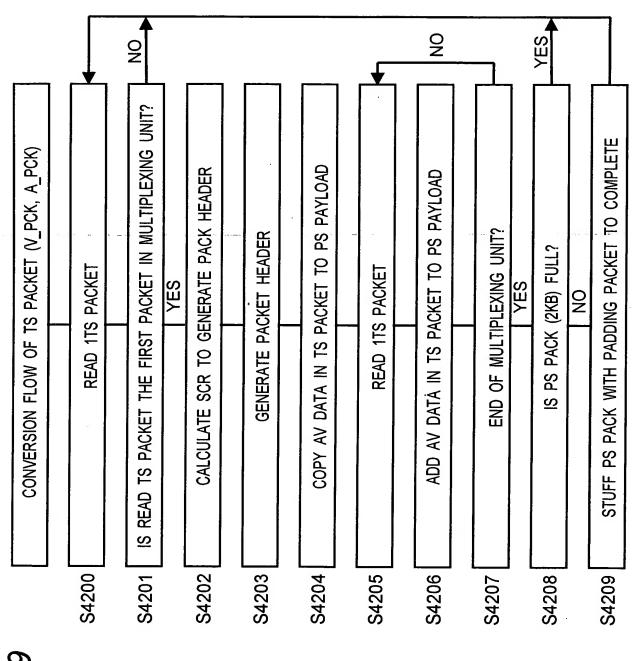


Fig. 59

PACK HEADEI	PACK HEADER OF PACK IN MPEG2-PS	EG2-PS
Field	Number of bits	Permitted value
Pack_start_code	35	000001BAh
'01'	2	01b
SCR_base[3230]	3	
marker_bit	1	1b
SCR_base[2915]	15	
marker_bit	1	1b
SCR_base[140]	15	
marker_bit	1	1b
SCR_extension	6	
marker_bit	1	1b
program_mux_rate	22	6270h
marker_bit	1	1b
marker_bit	1	1b
reserved	2	11111b
pack_stuffing_length	3	q000

Fig. 61

SYSTEM HEADER OF DVD F	FORMAT	
FIELD	NUMBER OF BITS	PERMITTED VALUE
system_header_start_code	32	000001BBh
header_length	16	18
marker_bit	1	1b
rate_bound	22	6270h
marker_bit	1	1b
audio_bound	6	0 to 2
fixed_flag	1	Ob
CSPS_flag	1	Provider defined
system_audio_lock_flag	1	1b
system_video_lock_flag	1	1b
marker_bit	1	1b
video_bound	5	1
Packet_rate_restriction_flag	1	Provider defined
reserved_bits	7	7Fh
stream_id	8	B9h (all video streams)
'11'	2	11b
P-STD_buf_bound_scale	1	1b
P-STD_buf_size_bound	13	232
stream_id	8	B8h (all audio streams)
'11'	2	11b
P-STD_buf_bound_scale	1	0
P-STD_buf_size_bound	13	32
stream_id	8	BDh (private_stream_1)
'11'	2	11b
P-STD_buf_bound_scale	1	1b
P-STD_buf_size_bound	13	58
stream_id	8	BFh (private_stream_2)
'11'	2	11b
P-STD_buf_bound_scale	1	1b
P-STD_buf_size_bound	13	2

Fig. 62A

PACKET HEADER OF RDI_PCK		
FIELD	NUMBER OF BITS	PERMITTED VALUE
packet_strat_code_prefix	24	000001h
stream_id	8	BFh (private_stream_2)
PES_packet_legnth	16	07D4h

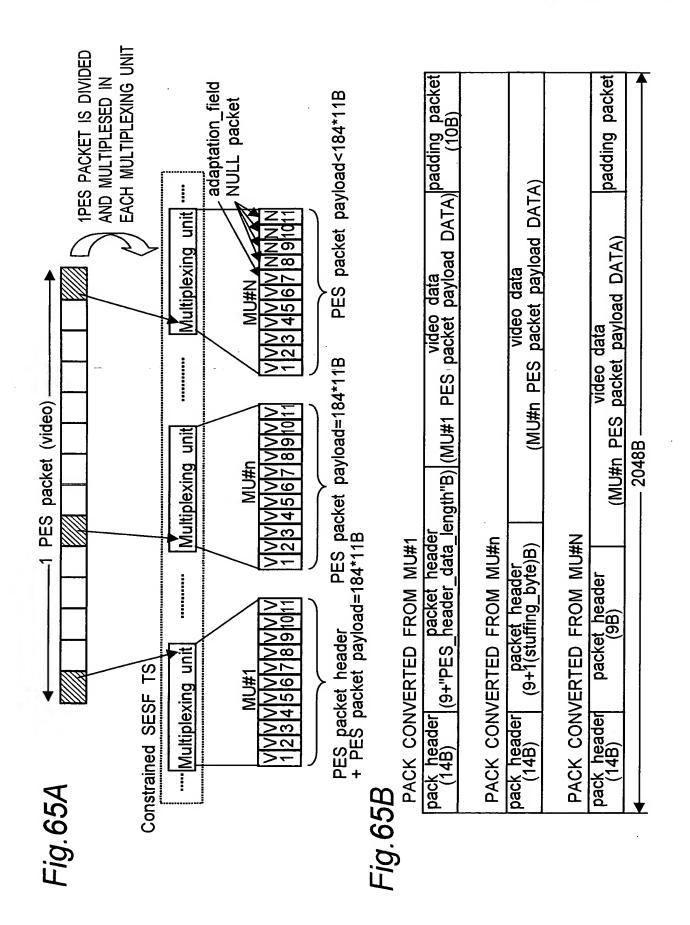
FIR. 62B

PRIVATE HEADER OF RDI_PCK	,	
FIELD	NUMBER OF BITS	PERMITTED VALUE
sub_stream_id	8	50h

PACKET HEAD!	PACKET HEADER OF PACKET IN MPEG2-PS	MPEG2-PS
Field	Number of bits	Permitted value
PES_priority	1	qo
data_alignment_indicator	1	qp
copyright	1	qo
ESCR_flag	1	qo
ES_rate_flag	1	qo
DSM_trick_mode_flag	ı	qo
additional_copy_info_flag	1	qo
PES_CRC_flag	1	qo
PES_extension_flag	1	same value as Constrained SESF
PES_header_data_length	8	same value as Constrained SESF
PES_private_data_flag	1	0b, if exists
pack_header_field_flag	1	0b, if exists
Program_packet_sequence_ counter_flag	1	0b, if exists
P-STD_buffer_flag		1b, if exists
PES_extension_flag_2	1	0b, if exists
stuffing_byte	N*8	stuffed fully with '0×FF'

Fig. 64

PRIVATE HEADER OF AC-3 IN DVD FORMAT	DVD FORMAT	
FIELD	NUMBER OF BITS	PERMITTED VALUE
sub_stream_id	8	80h (primary) or 81h (secondary)
number_of_frame_headers	8	Provider defined
first_access_unit_pointer	16	0



vi



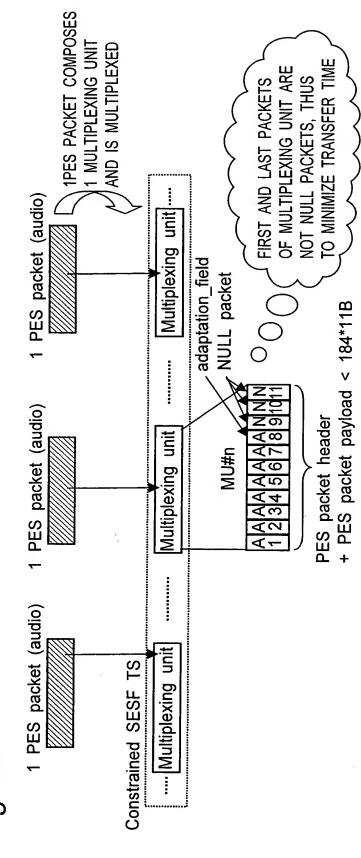


Fig. 66B

ONVERTED FROM MU#n	ler packet header WU#1 PES packet payload DATA) padding packet	
PACK CONVERTED	pack header (9+"PES_	

BIT RATE ALLOWED IN Constrained SESF	MAXIMUM BYTE LENGTH OF PES PACKET PAYLOAD (AC-3 audio)	MAXIMUM BYTE LENGTH MAXIMUM BYTE LENGTH OF PES PACKET PAYLOAD (AC-3 audio) (MPEG1-audio)
64 Kbps	1792	1920
80 Kbps	1920	1920
sdq) 96	1920	1728
112 Kbps	1792	1680
128 Kbps	1536	1920
160 Kbps	1920	1920
192 Kbps	1536	1728
224 Kbps	1792	1344
256 Kbps	1024	1536
320 Kbps	1280	1920
384 Kbps	1536	1152
448 Kbps	1792	N/A

Fig. 68

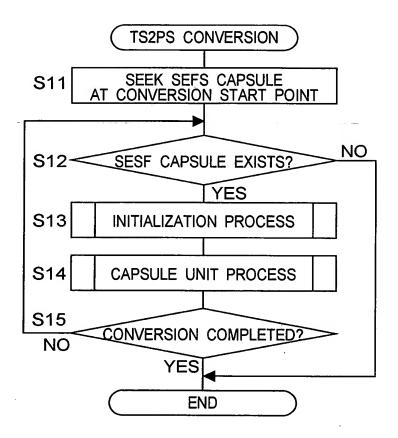


Fig.69

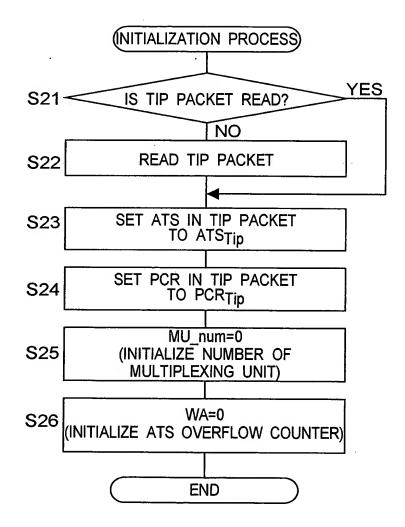


Fig. 70

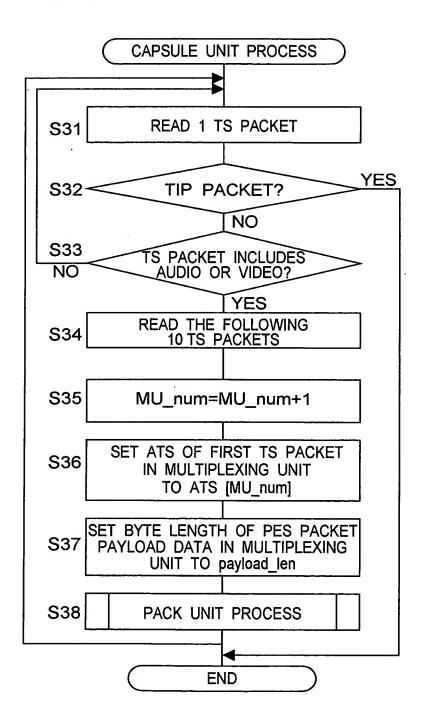


Fig.71

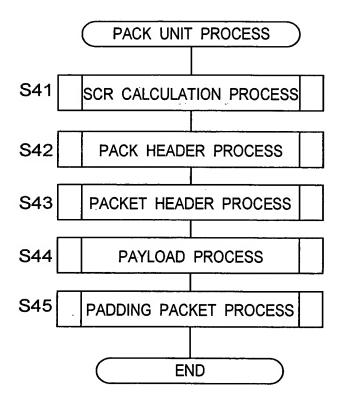


Fig. 72

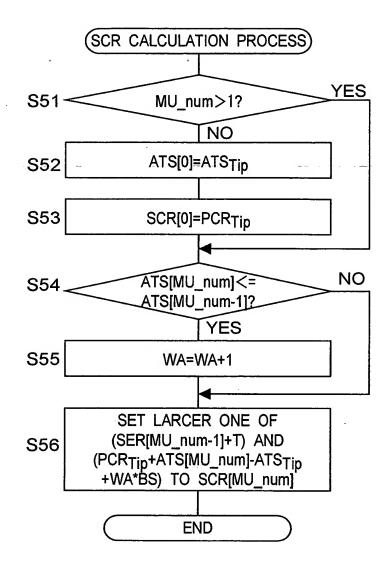
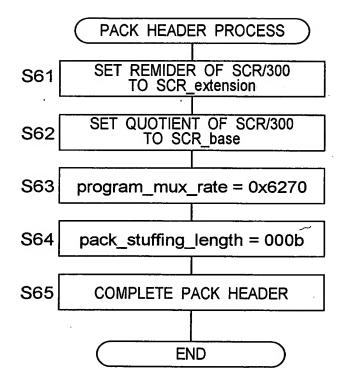


Fig. 73



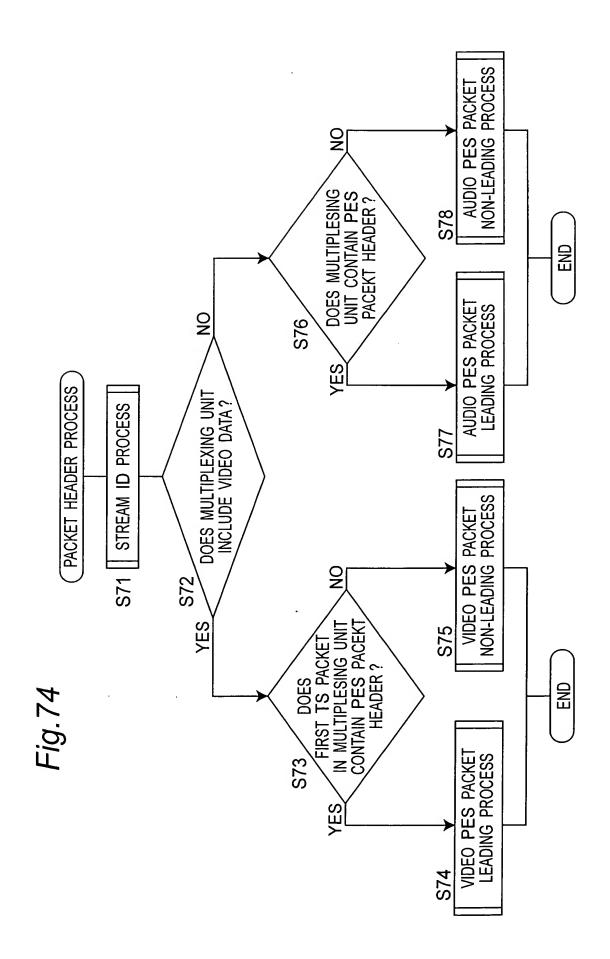


Fig. 75

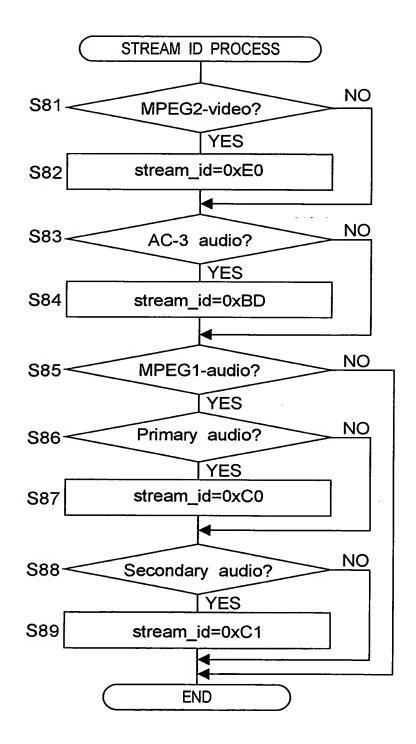
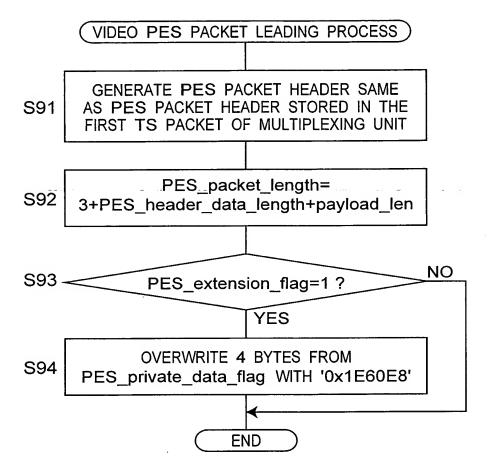
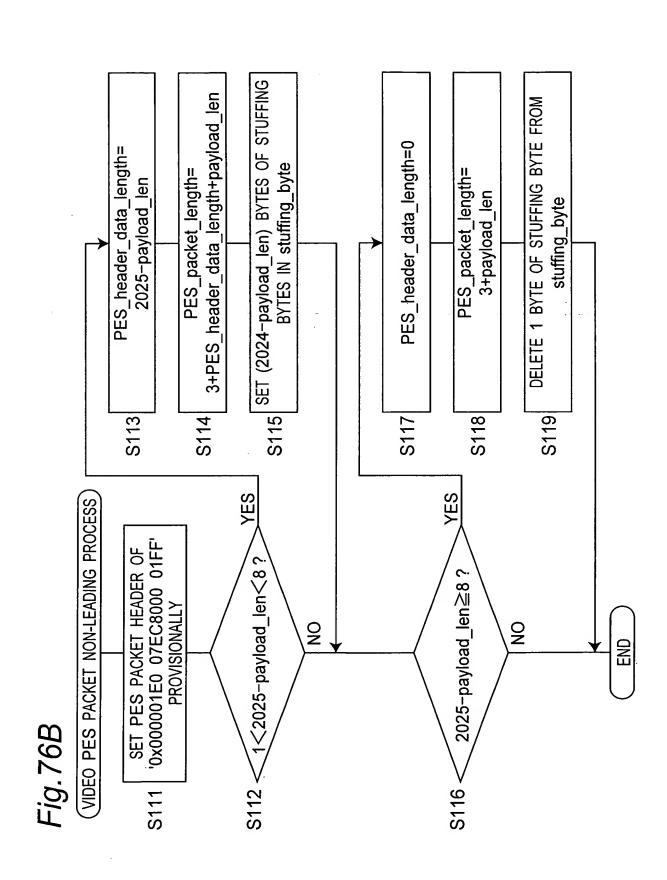


Fig.76A





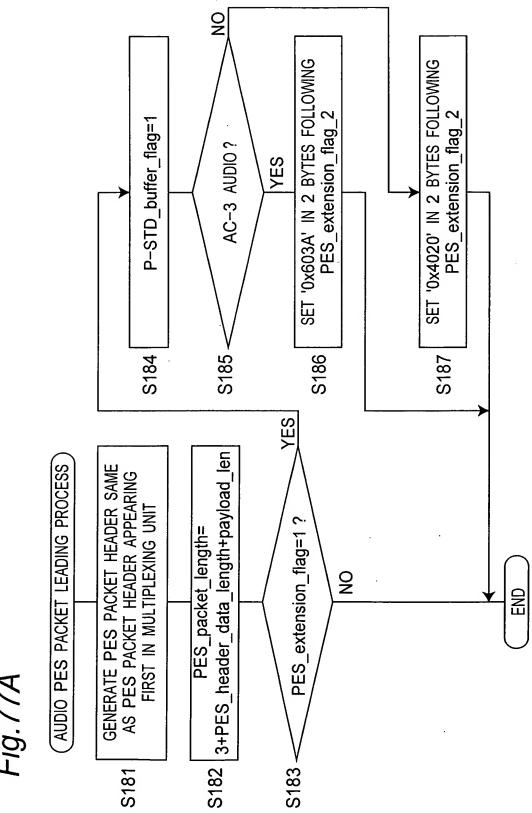


Fig. 77A

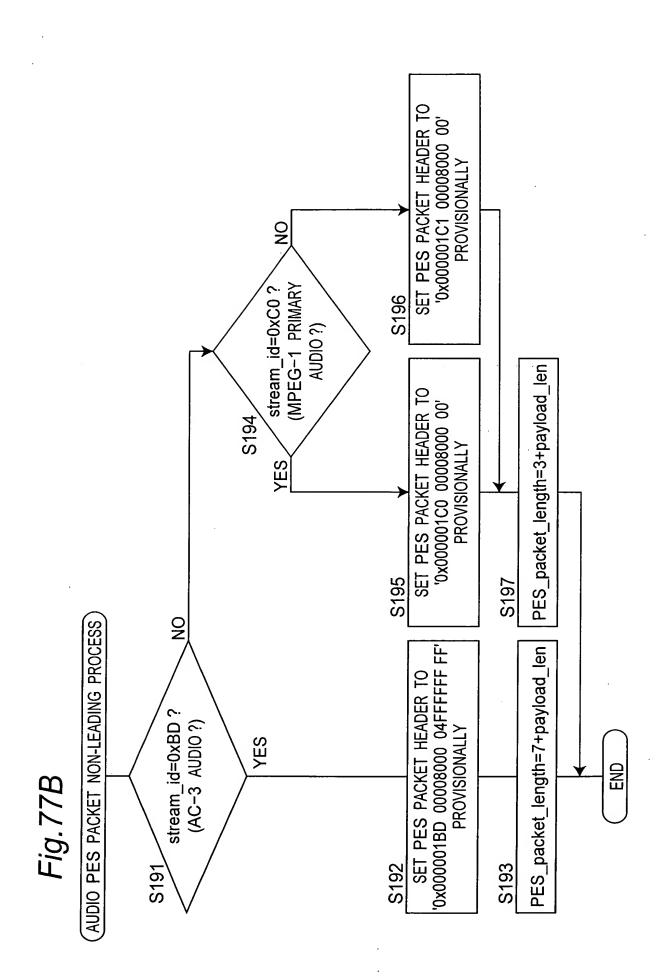


Fig.78

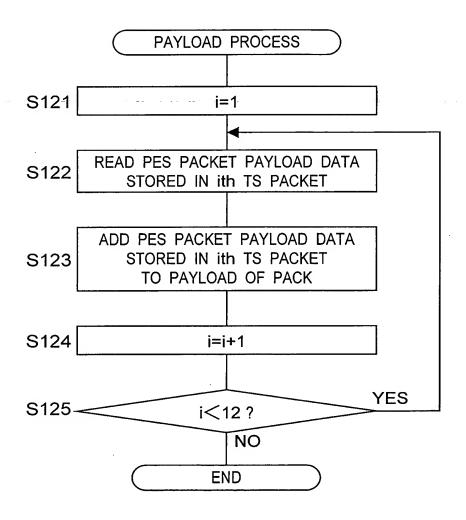
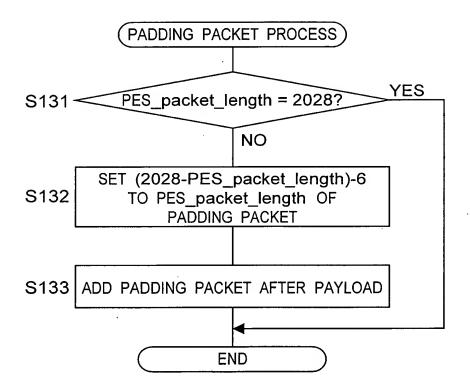


Fig. 79



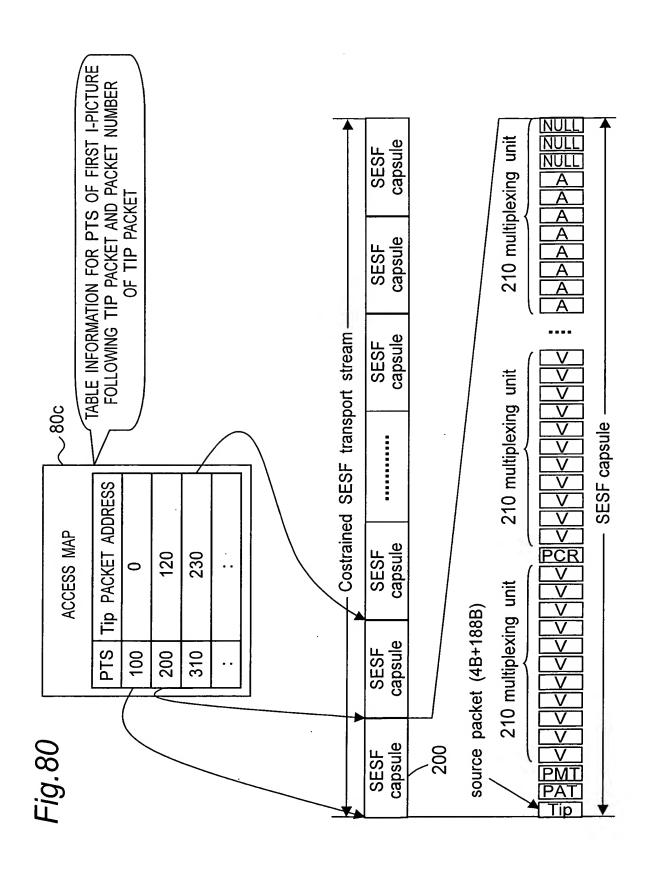
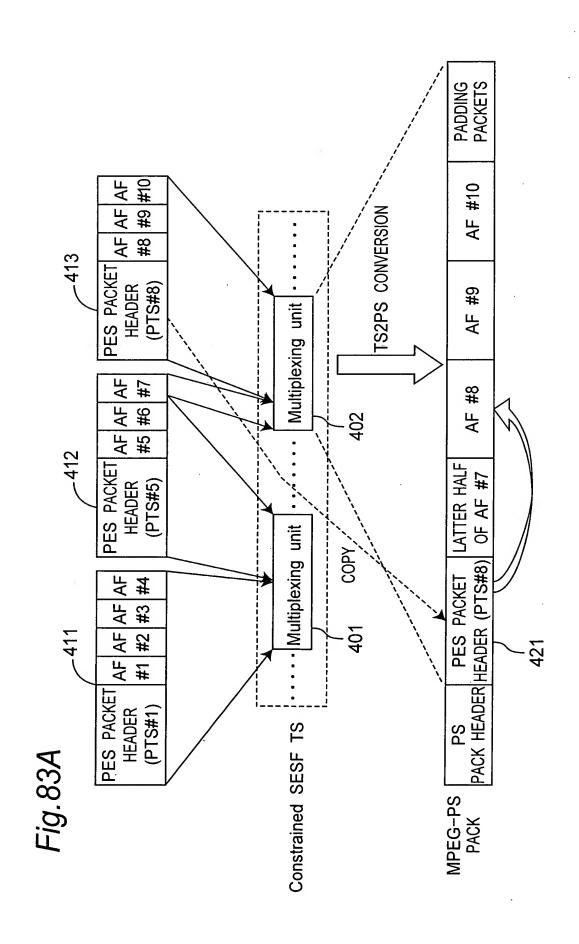


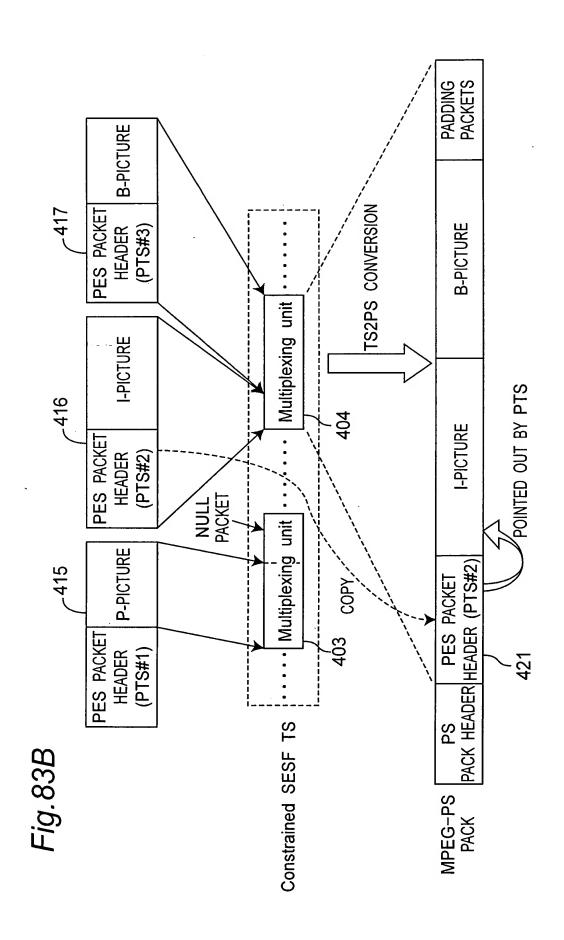
Fig.81

```
PES_packet(){
                         packet_start_code_prefix
                                                                             24
                         stream id
                                                               8
                         PES_packet_length
                                                                             16
                         '10'
                                                                              2
                                                                              2
                         PES scrambling control
                                                                              1
                         PES_priority
                         data alignment indicator
                                                                              1
                                                               1
                         copyright
                        original_or_copy
                                                                              1
                         PTS DTS flags
                                                                              2
                         ESCR_flag
                                                                              1
                         ES rate flag
                                                                              1
                         DSM_trick_mode_flag
                                                                              1
                         additional_copy_info_flag
                                                                              1
                         PES_CRC_flag
                                                                              1
                         PES_extension_flag
                                                                              1
                         PES_header_data_length
                                                                              8
                         if (PTS_DTS_flags == '10'){
         PES packet header
                               '0010'
                                                                              4
                               PTS
                                                                             36
PES packet
                        if (PTS_DTS_flags == '11'){
                               '0011'
                                                                              4
                               PTS
                                                                             36
                               '0001'
                                                                              4
                               DTS
                                                                             36
                        if (PES_extension_flag == '1'){
                               PES private data flag
                                                                              1
                               pack_header_field_flag
                                                                              1
                               program packet sequence counter flag
                                                                              1
                               P-STD_buffer flag
                                                                              1
                               reserved
                                                                              3
                               PES_extension_flag_2
                                                                              1
                               if (P-STD_buffer_flag =='1'){
                                      '01<sup>-</sup>
                                                                              2
                                     P-STD_buffer_scale
                                                                              1
                                       P-STD buffer size
                                                                             13
                               }
                        for( i=0 ; i<N1 ; i++){
                               stuffing_byte
                                                                              8
          PES packet
       payload
                        for( i=0 ; i<N2 ; i++){
                               PES_packet data byte
                                                                              8
                        }
```

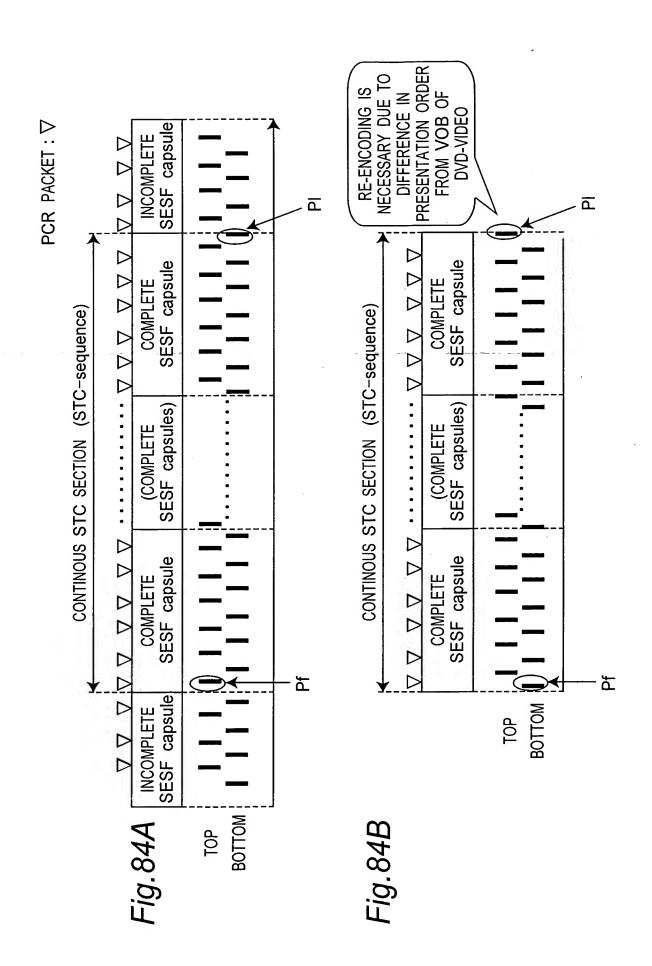
Fig. 82

CALCULATION OF INTERNAL DATA FIELD CALCULATION METHO Pack header SC CALCULATE FROM AT NV PCK LBN CALCULATE FROM FV VOBU E PTM CALCULATE FROM FV VOBU SE EXCEPT FOR THE LA PTM VOBU SE EXCEPT FOR THE LA VOBU E TM NV PCK LBN SAME TO PCI data VOBU E DIMING TS2P VOBU COUNT PACKS UNTIL 1STREF EA picture coding type IS VOBU COUNT PACKS UNTIL 1STREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA picture coding type IS VOBU COUNT PACKS UNTIL 2NDREF EA PICTURE COUNTIL PACKS UNTIL	INTERNAL DATA OF NIV DOK
	CALCULATION METHOD
	CALCULATE FROM ATS AND PCR OF Tip PACKET, AND ATS OF A HEAD Tip PACKET IN Multiplexing unit.
	I COUNT PACKS CONVERTED IN THE CONVERSION.
	M CALCULATE FROM FVFPST OF Tip PACKET.
	VOBU_E_PTM CALCULATE FROM FVFPST OF NEXT TIP PACKET. ONLY FOR THE LAST NV_PCK, THE VALUE IS EQUAL TO VOB V E PTM.
 	EXCEPT FOR THE LAST NV_PCK, 0x00 IS FILLED. FOR THE LAST NV_PCK, THE VALUE IS EQUAL TO VOB_V_E_PTM.
 	
LL	ASSIGN SCR OF NV
	COUNT DURING TS2PS TO ASSIGN, OR CALCULATION FROM ACCESS MAP
VOBU 3DODEC EA	COUNT PACKS UNTIL
SUDVELLEN	COUNT PACKS UNTIL
NOBO_C_IDN	
C_ELTM	SAME TO PCI data
WOB V S PTM	M ASSIGN VOBU_S_PTM OF THE FIRST VOBU.
VOB_V_E	ASSIGN REPRODUCTION END TIME OF CONVERSION SECTION
MTG_	(IT MAY BE OBTAINED BEFORE TS2PS CONVERSION)
VOBU_SRI	INFORMATION IS EXTRACTED WITH A SET OF NV PCK LBN AND VOBU S PTM ON TS2PS CONVERSION AND THEN ASSIGNED IT TO THIS FIELD. ALTERNATELY, A VALUE CALCULATED FROM ACCESS MAP.
A_SYNCA	COMPARING VOBU S PTM OF NV PCK WITH AUDIO PTS, THE NUMBER OF PACKS COUNTED TO ONE PACK BEFORE THE PACK AUDIO PTS IS GREATER THAN VOBU_S_PTM AT THE FIRST TIME IS ASSIGNED TO THIS FIELD.

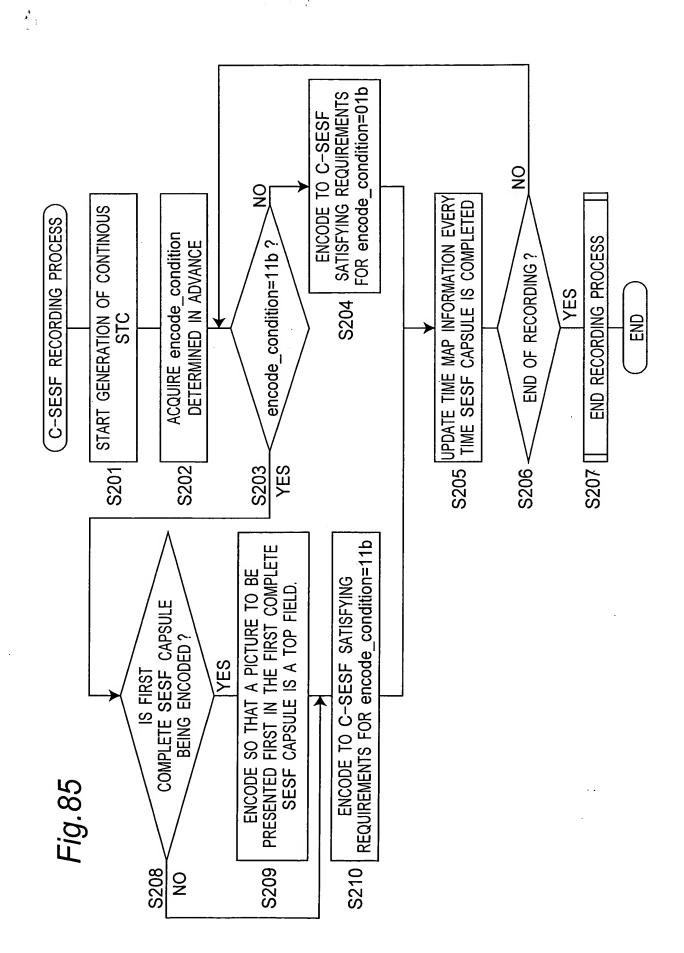




63° Que



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